

CLAIMS:

1. A method of computing an unnormalized texture map coordinate for a non-power of two texture map, comprising:
  - receiving a normalized texture map coordinate corresponding to the non-power of two texture map;
  - receiving a non-power of two LOD dimension corresponding to the non-power of two texture map; and
  - scaling the normalized texture map coordinate by the non-power of two LOD dimension to compute the unnormalized texture map coordinate for the non-power of two texture map.
2. The method of claim 1, wherein the non-power of two LOD dimension is a width.
3. The method of claim 1, wherein the non-power of two LOD dimension is a height.
4. The method of claim 1, wherein the unnormalized texture map coordinate for the non-power of two texture map is used to determine an address of a texel within the non-power of two texture map.
5. A method of using a non-power of two texture map, comprising:
  - receiving a normalized texture map coordinate corresponding to the non-power of two texture map;
  - receiving an LOD dimension corresponding to the non-power of two texture map;
  - obtaining a reduced portion of the normalized texture map coordinate; and
  - scaling the reduced portion by the LOD dimension to compute an unnormalized texture map coordinate.

6. The method of claim 5, wherein the LOD dimension is selected from the group consisting of a width, a height, and a depth.
7. The method of claim 5, wherein the normalized texture map coordinate corresponding to the non-power of two texture map is represented in a floating-point format.
8. The method of claim 5, wherein the step of obtaining a reduced portion of the normalized texture map coordinate comprises performing a wrap computation based on a wrap mode.
9. The method of claim 8, further comprising:
  - receiving another normalized texture map coordinate corresponding to the non-power of two texture map;
  - receiving another LOD dimension corresponding to the non-power of two texture map;
  - obtaining a reduced portion of the other normalized texture map coordinate; and
  - scaling the reduced portion of the other normalized texture map coordinate by the other LOD dimension to compute another unnormalized texture map coordinate.
10. The method of claim 5, wherein the unnormalized texture map coordinate is used to determine an address of a texel within the non-power of two texture map.
11. The method of claim 4, wherein the texel is filtered as a function of a weight to produce a filtered texel for a fragment.
12. The method of claim 5, wherein the non-power of two texture map is a video image.

13. The method of claim 5, further comprising the step of filtering the non-power of two texture map to produce a second level of detail.

14. The method of claim 13, wherein a dimension of the second level of detail is not half of the dimension of the non-power of two texture map.

15. A coordinate computation unit for determining texture map coordinates for non-power of two texture maps, comprising a scale unit configured to receive the normalized texture coordinate and scale the normalized texture coordinate by a non-power of two LOD dimension to produce an unnormalized texture map coordinate for the non-power of two texture map.

16. The coordinate computation unit of claim 15, wherein the scale unit is configured to receive a reduced portion of the normalized texture coordinate and produce an unnormalized texture map coordinate for the non-power of two texture map.

17. The coordinate computation unit of claim 16, further comprising a parameter conversion unit configured to receive the normalized texture coordinate corresponding to the non-power of two texture map and produce the reduced portion of the normalized texture coordinate.

18. The coordinate computation unit of claim 17, wherein the parameter conversion unit determines the reduced portion responsive to a wrap mode specified by a fragment program.

19. The coordinate computation unit of claim 17, wherein the scale unit is configured to scale the reduced portion by a non-power of two LOD dimension.

20. The coordinate computation unit of claim 19, wherein the non-power of two LOD dimension is selected from the group consisting of width, height, and depth.

21. The coordinate computation unit of claim 15, wherein the coordinate computation unit is included in a texture unit, the texture unit comprising an address computation unit configured to receive the unnormalized texture coordinate and produce an address corresponding to a texel in the non-power of two texture map.

22. The coordinate computation unit of claim 21, wherein the texture unit is included within a programmable graphics processor, the programmable graphics processor including a rasterizer configured to produce the normalized texture coordinate.